ACCELERATOR CONTROL, FUEL & EXHAUST SYSTEMS

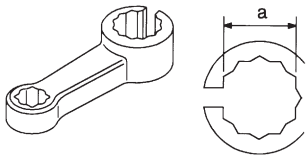
SECTION FE

CONTENTS

Special Service Tool

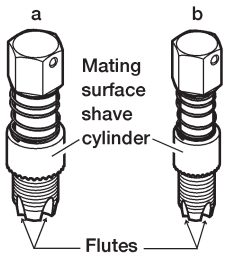
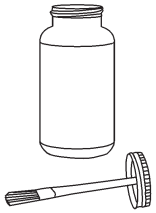
Special Service Tool

NFFE0001

Tool number Tool name	Description	
KV10114400 Heated oxygen sensor wrench	 NT636	Loosening or tightening heated oxygen sensors **a: 22 mm (0.87 in)**

Commercial Service Tools

NFFE0008

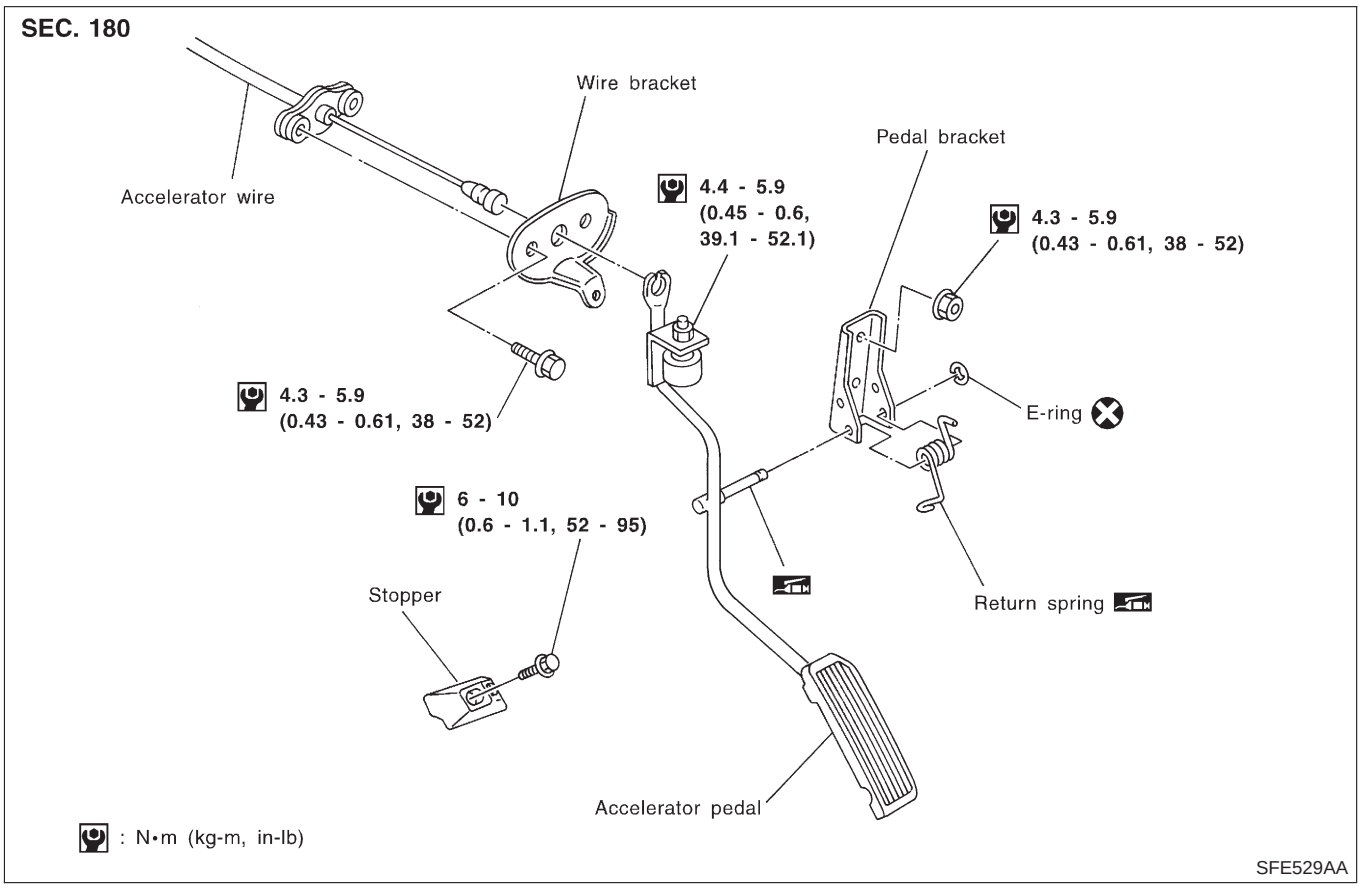
Tool number Tool name	Description	
Oxygen sensor thread cleaner	 AEM488	Reconditioning the exhaust system threads before installing a new oxygen sensor (Use with anti-seize lubricant shown below.) **a: J-43897-18 (18 mm dia. and pitch of 1.5 mm) for zirconia oxygen sensor** **b: J-43897-12 (12 mm dia. and pitch of 1.25 mm) for titania oxygen sensor**
Anti-seize lubricant (Permatex 133AR or equivalent meeting MIL specification MIL-A-907)	 AEM489	Lubricating oxygen sensor thread cleaning tool when reconditioning exhaust system threads

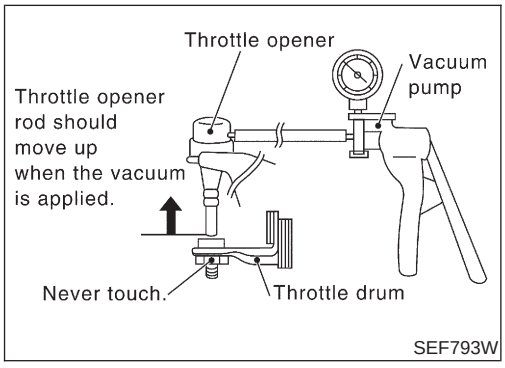
Removal and Installation

NFFE0002

CAUTION:

- **When removing accelerator wire, make a mark to indicate lock nut's initial position.**
- **Check that throttle valve opens fully when accelerator pedal is fully depressed. Also check that it returns to idle position when pedal is released.**
- **Check accelerator control parts for improper contact with any adjacent parts.**
- **When connecting accelerator wire, be careful not to twist or scratch wire.**





Adjusting Accelerator Wire

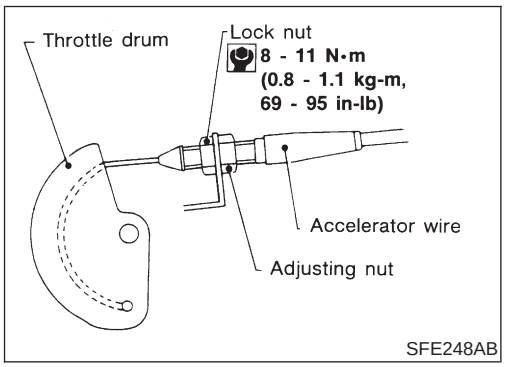
NFFE0003

CAUTION:

- **Make sure the ASCD wire is not pulling the throttle drum.**
- **For ASCD wire adjustment, refer to *EL-240*, "AUTOMATIC SPEED CONTROL DEVICE (ASCD)".**

1. Remove the vacuum hose connected to the throttle opener.
2. Connect suitable vacuum hose to vacuum pump as shown left.
3. Apply vacuum [more than −40.0 kPa (−400 mbar, −300 mmHg, −11.81 inHg)] until the throttle drum becomes free from the rod of the throttle opener.
   Make sure that there is clearance between the throttle

drum and rod.
If NG, refer to ***EC-92***, "Basic Inspection".
If OK, go to following step.



4. Loosen lock nut.
5. Tighten accelerator adjusting nut until throttle drum starts to move.
6. From that position, turn back adjusting nut 1.5 to 2 turns, and secure lock nut.
7. Release vacuum from the throttle opener.
8. Remove vacuum pump and vacuum hose from the throttle opener.
9. Reinstall the original vacuum hose to the throttle opener securely.

Removal and Installation

NFFE0004

WARNING:

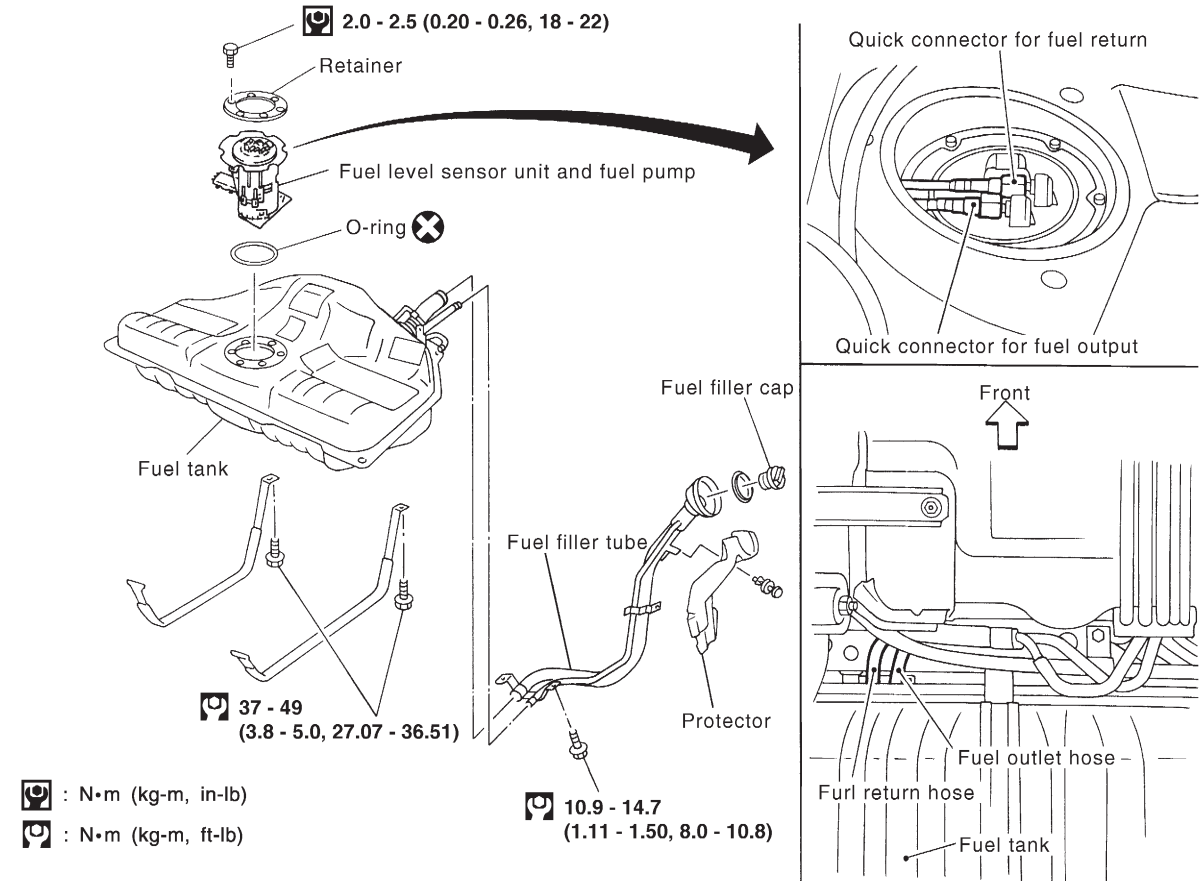
When replacing fuel line parts, be sure to observe the following:

- **Put a "CAUTION: INFLAMMABLE" sign in workshop.**
- **Do not smoke while servicing fuel system. Keep open flames and sparks away from work area.**
- **Be sure to disconnect battery ground cable before conducting operations.**
- **Be sure to furnish workshop with a CO_2 fire extinguisher.**
- **Drain fuel from fuel tank and put drained fuel in an explosion-proof container and put lid on securely.**

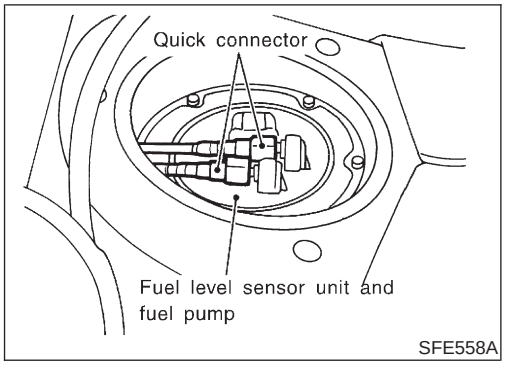
CAUTION:

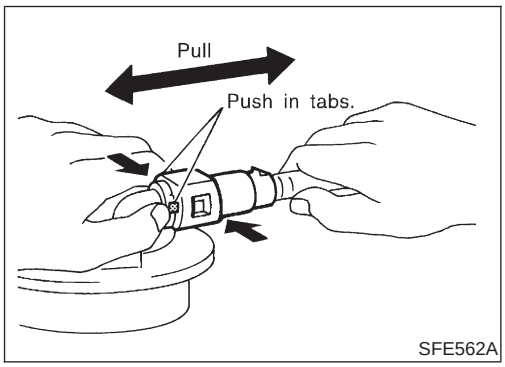
- **Before disconnecting fuel hose, release fuel pressure from fuel line. Refer to EC-36, "Fuel Pressure Release".**
- **Do not disconnect any fuel line unless absolutely necessary.**
- **Plug hose and pipe openings to prevent entry of dust or dirt.**
- **Always replace O-ring and clamps with new ones.**
- **Do not kink or twist hose and tube when they are installed.**
- **Do not tighten hose clamps excessively to avoid damaging hoses.**
- **Tighten bolts to specified torque.**
- **After installation, run engine and check for fuel leaks at connections.**

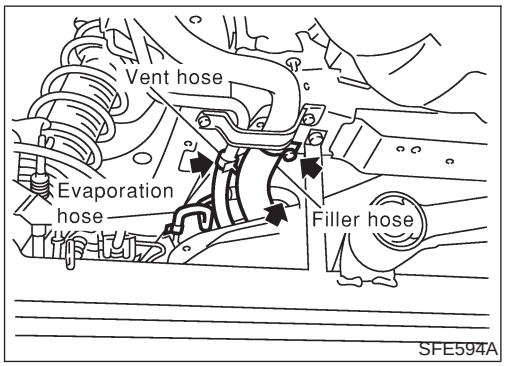
SEC. 172

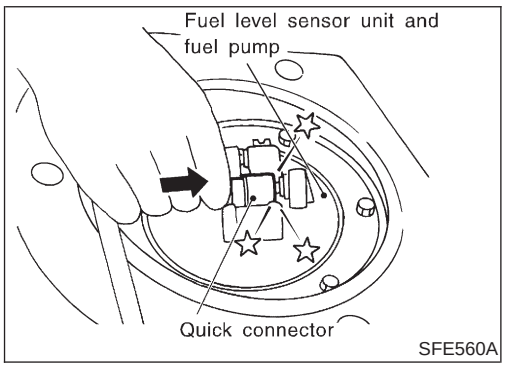


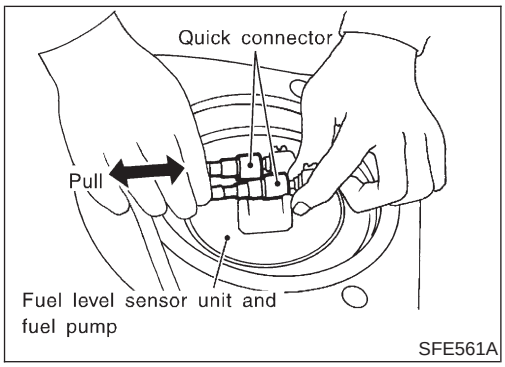
SFE593A











Fuel Tank

NFFE0006

REMOVAL

NFFE0006S01

1. Release fuel pressure from fuel line.
   Refer to ***EC-36***, “Fuel Pressure Release”.
2. Disconnect battery ground cable.
3. Drain fuel from fuel tank.
4. Disconnect electrical connector.
5. Remove the quick connector as follows.

a. Put mating marks on tubes and connectors for correct installation.

b. Hold the sides of the connector, push in tabs, and pull out the tube inserted in the retainer.

CAUTION:

- **The tube can be removed when the push in tabs are completely depressed. Do not twist it more than necessary.**
- **Do not use any tools to remove the quick connector.**
- **Keep the connecting portion of the tube and the quick connector clean.**

6. Disconnect filler hose, vent hose and evaporation hose at fuel tank side.
7. Remove fuel tank mounting band bolts while supporting fuel tank.
8. Remove fuel tank.

INSTALLATION

NFFE0006S02

To install, reverse the removal procedure. Connect the quick connector as follows:

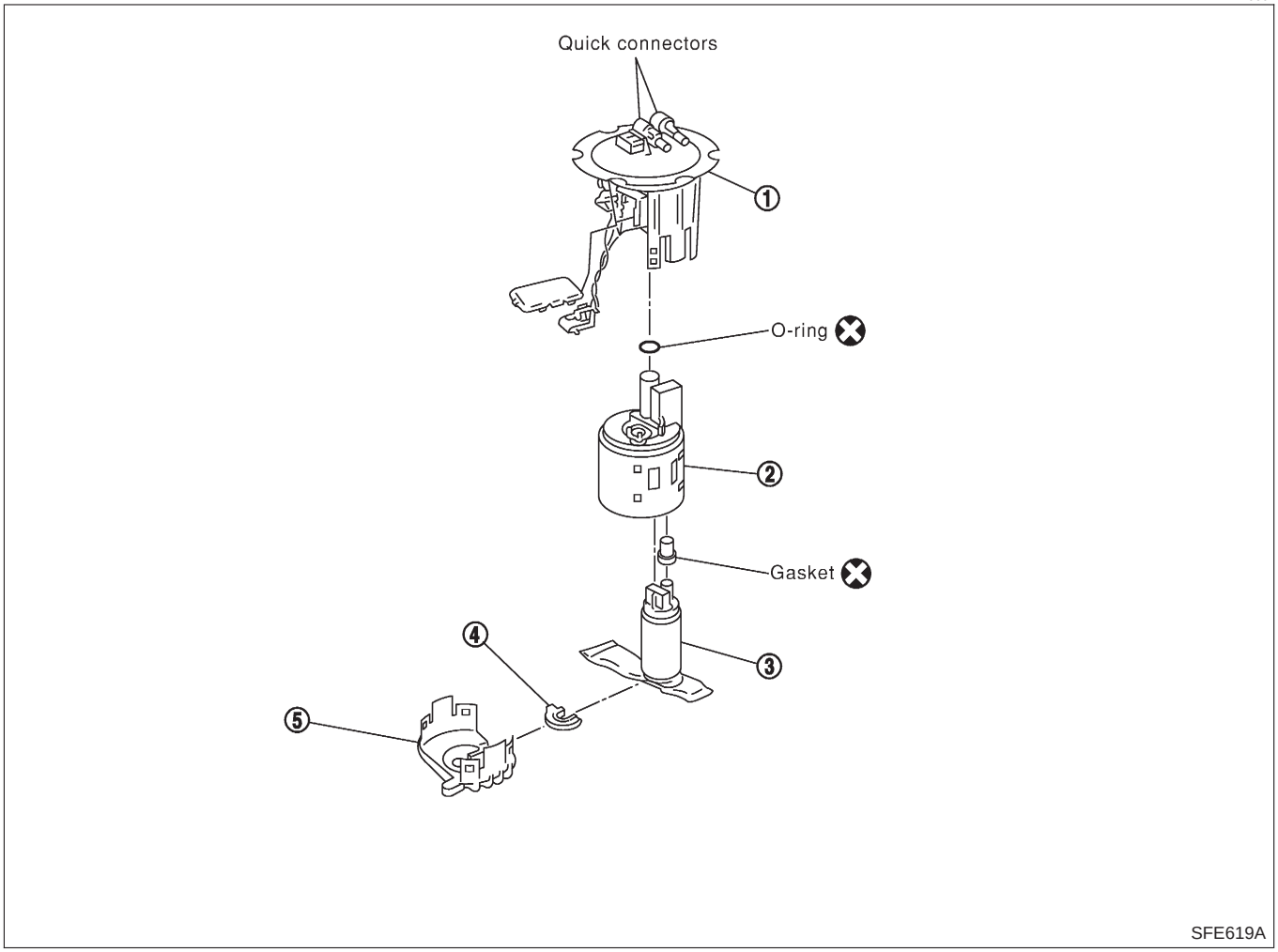
- Align mating marks on tubes and connectors for correct installation.
- Align push in tabs with retainer openings.
- Be sure that the connecting portion of the tube and the quick connector is clean and smooth.
- Insert tube into the center of the connector until you hear a click.

After connecting quick connector, make sure the connection is firmly made using the following method.

- Pull on the fuel tube and connector to make sure they are firmly connected.
- Start the engine, increase engine speed and verify that there are no leaks.

Fuel Pump, Fuel Level Sensor Unit and Fuel Filter

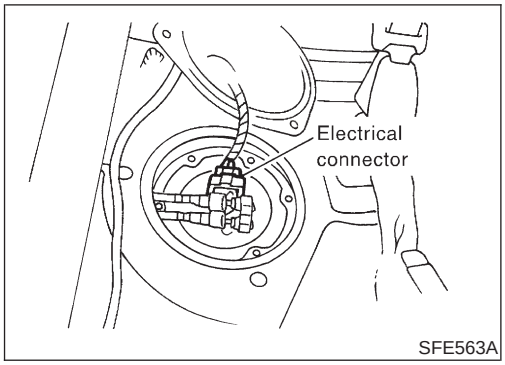
NFFE0007



1. Fuel level sensor unit
2. Fuel filter
3. Fuel pump
4. Pump support rubber
5. Fuel pump bracket

REMOVAL

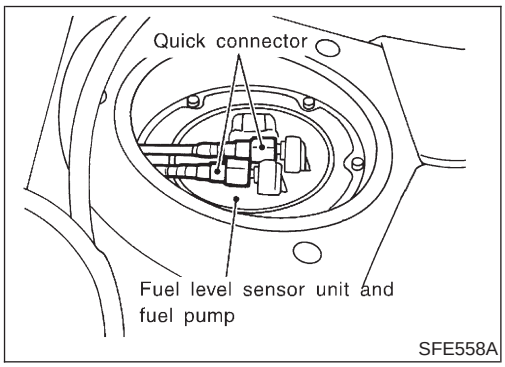
NFFE0007S01



1. Release fuel pressure from fuel line.
   Refer to *EC-36*, "Fuel Pressure Release".
2. Remove rear seat bottom. Refer to ***BT-41***, "Removal and Installation".
3. Remove inspection hole cover located under the rear seat.
4. Disconnect electrical connector.
5. Remove the quick connectors.

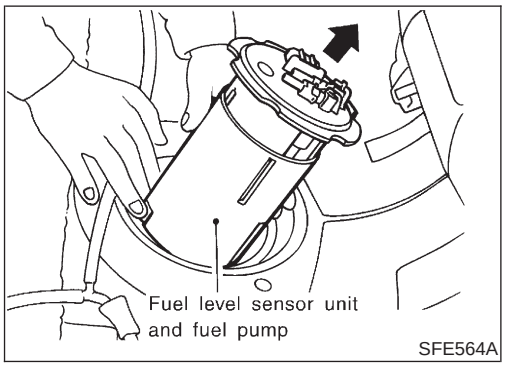
- For removal of quick connectors, refer to step 5. of "Fuel Tank Removal".

6. Remove the six screws.



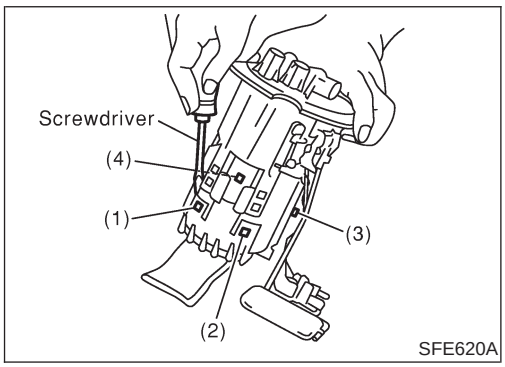
7. Pull out the fuel level sensor unit and fuel pump.

- **Do not damage the arm of the fuel level sensor and fuel tank temperature sensor.**

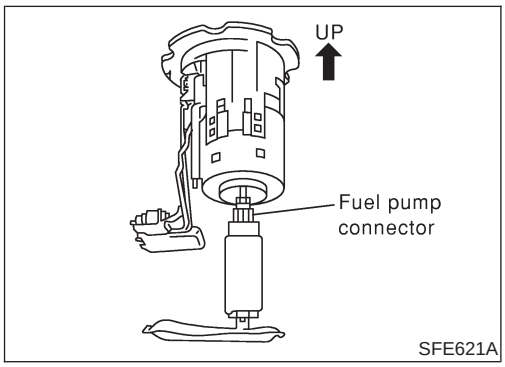


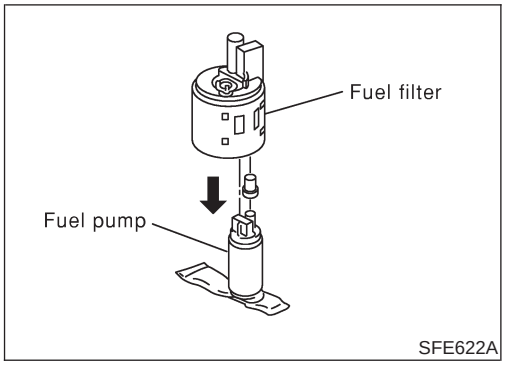
8. Remove flange of fuel level sensor unit and fuel pump bracket.

- Using a screwdriver, remove the snap fit portion in the order of (1), (2), (3) and (4) as shown in the figure at left.

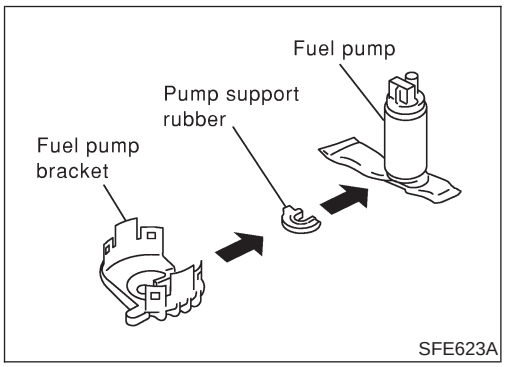


9. Pull out the fuel level sensor unit from the fuel pump bracket.
10. Disconnect fuel pump connector.





11. Remove fuel pump, then push down the fuel pump as shown in the figure at left.

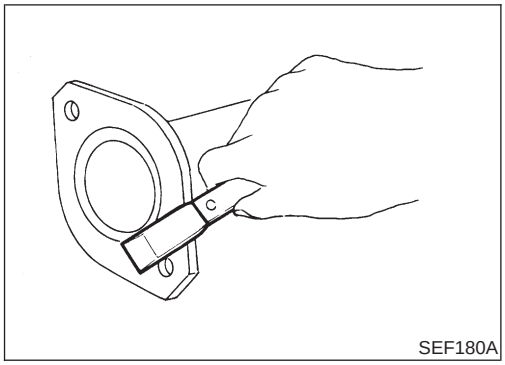


12. Separate the fuel pump from the fuel pump bracket, and pump support rubber.

INSTALLATION

NFFE0007S02

Installation is in the reverse order of removal.



Removal and Installation

NFFE0005

CAUTION:

- **Always replace exhaust gaskets with new ones when reassembling. If gasket remains on flange surface, scrape off completely as shown at left.**
- **With engine running, check all tube connections for exhaust gas leaks, and entire system for unusual noises.**
- **Check to ensure that mounting brackets and mounting insulators are installed properly and free from undue stress. Improper installation could result in excessive noise or vibration.**
- **Discard any heated oxygen sensor (HO2S) which has been dropped from a height of more than 0.5 m (19.7 in) onto a hard surface such as a concrete floor; use a new one.**
- **Before installing a new oxygen sensor, clean exhaust system threads using oxygen sensor thread cleaner tool, J-43897-18 or J-43897-12, and apply anti-seize lubricant.**

SEC. 200

Models with three way catalyst